LEHIGH VALLEY
HOSPITAL

Medical Staff Progress Notes

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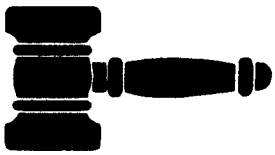
In This Issue...



From the President

Picture this. You set out in the early morning hours to see about a dozen patients who are in the hospital, knowing that no matter what time you pick for rounds, either the patients laboratory report or the patient will be missing. You arrive on the floor at approximately 7:15 a.m. hoping to maximize your ability to catch patients in their beds, but realizing that blood laboratory drawn only an hour before will not be ready, even in PHAMIS, and hence, your evaluation will be incomplete.

You arrive at a floor which is nothing short of chaotic. Nurses have just broken up from their change of shift and are busily scurrying around giving medicines and documenting graphic notes in several places. You look at the "Big Board" and try to find your patient. She has been moved to another room and it takes you several minutes to figure this out. You move to the opposite side of the nursing station to find her chart but it's not in the rack. You begin the search for this medical record, looking carefully at the secretarial desk, perusing the cluttered tables, lifting up charts that have been thrown haphazardly about the nursing station to try to locate the name. Unsuccessful, you poll nurses who are writing busily in stacks of records, asking if anyone has seen the chart. It's nowhere to be found in this area. You stroll about the floor and after several minutes it's located in a side conference room.

You feel compelled to move quickly because soon the floor will be emptied as patients are shuttled about the hospital for physical therapy, x-rays and tests. Grabbing the chart you go to bedside and miraculously find the patient in her bed. You take your interim history and examine the patient. She looks febrile and her one lung sounds poor. Strolling through the chart you look for the latest vital signs. They are not there. They have been taken by the nurse and charted on a separate piece of paper and have not yet been transcribed. Coming out of the room you look for the nurse who would know the patient and how the night went. She is nowhere to be found. You go to the central desk and ask the unit clerk to find the nurse. If she is not on break, helping another nurse in another section, she will be somewhere on the floor. The unit clerk begins the process of paging the nurse in each of any of a possible ten rooms. "Amy are you there?" "Amy are you there?" "Amy are you there?", she asked, each time running from room to room. Amy is not there. You poke your head in a number of patient rooms but she is not to be found.

Several minutes elapse and a harried nurse rushes to the desk to share information from last evening. She does not know the patient very well. She just started today and nursing rounds were rushed. She does have the vital signs in a separate book and she shares them with you. Looking through the lab section of the book, you see yesterday's lab which you already saw yesterday afternoon. On the chance that a CBC and chest x-ray are available, you go to the PHAMIS terminal, painstakingly log in and wait for the machine to chug, chug, several minutes later, to the "lab-all" screen for the patient, whose ID you have now meticulously entered into the machine. Blood laboratory are "pending", as expected. You "back out" of this screen. You are interested in the results of a chest x-ray done yesterday afternoon. You type in "RSLTR" and wait for the machine to chug, chug to the appropriate screen. Several minutes elapse. The machine displays a screen that shows these tests have been done. Press the appropriate F key and find "no text". "Report has not been authenticated."

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Deciding it would be important to know the result of that chest x-ray, you call the radiology file room. The phone rings several times before a busy secretary picks up the phone. You ask if the reading is available on the chest x-ray on a particular patient and after a very long wait she returns to tell you that she will have to find a radiologist to go over it, cause it's "not in PHAMIS". You knew that. The radiologist is not available at this time and he will call you back. In the meantime, you have received a half dozen pages and are searching madly to find a phone to return them while you are paging through the chart attempting to write your note. All phones are in use so you position yourself in wait, hoping to begin writing your note. There is no counter space to place the chart (completely cluttered with laser printers, PHAMIS equipment, computers, in and out bins). You balance the chart on one knee and grab the phone. A man operating a huge machine, making a horrendous noise, supposedly trying to clean the floor rushes by you making it nearly impossible to hear the conversation on the other end of the line. Patient call lights are beeping nonstop, a half dozen phones are ringing.

The clamor at the nurses desk adds to the confusion. There is a physician in the ER on the other line wishing to consult with you to see a patient urgently but you are having trouble hearing the details. You take some notes, make up your mind to see the patient within the hour. You answer a second page. It's to 7B (8795), a med surg floor. A unit clerk picks up the phone and you identify yourself. She asks what you want. You explain you were paged. The phone goes silent. In the distance you hear the calling "anyone paging Dr. ...? Anyone paging ..." Several minutes elapse. You wait patiently. The clerk comes back to the phone stating, "Sorry no one paged you". You hang up knowing the phantom pager will call you back in several minutes and you will repeat the process again. You answer a third page immediately. It's a 666 "call park." No one is on the other end. The doctor trying to reach you had been waiting 5 minutes to be put through to you, and getting no answer hung up. You call the page operator to find out the name of the physician who was trying to reach you. The phone rings 25 times before the operator answers. You tell her the problem. She scrolls through her computer and gives you the name of the doctor. For a second you debate "call-parking" the physician back but realize that maneuver would be pointless.

Your next patient is in the emergency room, which has begun to look something like a Vietnam war MASH unit. Nurses appear to be stressed to the maximum and trying to care for patients "admitted to the ER from last evening" while at the same time caring for newly sick patients coming in through the door. You ask the head secretary where your patient is. She has "no idea"; neither does the head nurse. You begin the odyssey of search, and find the patient, a mission which takes but a few more minutes. Reviewing the ER record of the new patient your beeper goes off. It's the radiologist calling you about the chest x-ray on the patient upstairs. There is a consolidation that is seen in the left lung, but you have now left the floor and have not recorded that in your note, hence, you will have to return to document this diagnosis and its treatment. You think that perhaps a blood gas would be in order on this patient. Calling the floor, you hope to talk with the nurse to help give an order. The phone rings no less than 25 times before it is answered by a unit clerk. You ask to speak with the nurse taking care of your patient. She will have to find this nurse. This nurse is now on break. A substitute nurse comes running in from the fray while you are left on hold. She appears out of breath and she is still looking for the chart. She states that she does not know the patient but "she will try" to get orders going. You ask for a stat blood gas and you make some changes in the patient's medication. The stat blood gas report will likely get back within the hour to the floor, but you will have to call the floor again for the results.. The non-stat medications order may take up to five or six hours before they actually get to the patients bedside and you debate whether the patient should wait that long.

You go back to seeing your patient in the emergency room, knowing that you have only eleven more patients plus a follow up on the first patient before you are finished rounds for the morning. Just then your beeper goes off to call 8795. It's 7B, the phantom pager is back. So goes a typical morning...

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What's wrong with this picture? It is a picture which reeks of inefficiency, poor communication and frustrated patient care, and it is not one which is fixed with "bandaid" solutions. More doctors, more nurses, more secretaries will not solve the problem. One approach appears to be the concept of "patient centered care", and it is one which we hope to roll out soon in the new nephrology unit on 7A. If successful, it may serve as a model for other units as they are renovated at the Cedar Crest site.

The structure of hospitals, as we currently know them, was created in the 1900s and is no longer efficient or useful for the type of modern communication that is needed today in daily patient care. Approximately 55% of hospital costs are in full time employees, and much of that appears to be spent either in idle time or in wasted hotel service or doesn't improve efficiency. If we look at a typical nurse day across the country, only 15% of his or her time is spent in clinical care, 20% is spent idle or chasing inefficiencies, 5% transporting patients, 30% in documenting and often re-documenting, 8% in hotel services, and 15% in scheduling of services. A typical patient who is admitted to the floor would see 19 new people enter her room in the first 24 hours, 35 people in the first 48 hours, and 50 people within the first three days. Clearly this dizzying array of new interactions leaves the patient feeling like a commodity in a factory. Patients admitted to our hospital, on average, spend six hours out of eight hours "off the floor," being sent out for tests. When they are "off the floor," they are unavailable for nursing, blood tests, and physician consultations. If you look at where these patients are going, they spend most of their time in cardiologic and radiologic services, but also in transit to physical therapy. None of this works out to improve efficiency for physicians or nurses, and none improves quality of patient care.

Admissions at a typical hospital take three to seven hours. At our hospital, if a patient needs to be admitted after 2 p.m., that patient might as well be admitted the next day because the admission will take close to seven hours. This would mean that lab orders would not be taken off the patients chart until 10 p.m. Turn around time for laboratory and medications, on average, would be three to five hours for non-stat orders, and close to an hour or two for many stat orders.

Four guiding principles appear to underwrite the patient centered care endeavor:

1. Move the services to the patient.
2. Group similar patients together.
3. Decrease the complexities of operations.
4. Eliminate bureaucratic barriers.

The concept of these four guiding principles is that they would restructure, reduce costs and improve quality at the same time. The re-engineered med-surg floor is nothing short of revolutionary. There is no central nursing station. A typical floor of 30 patients is structured into three zones. Each zone consists of a patient "server" caring for 10 patients or five patient rooms. Satellite pharmacies, pneumatic tube systems for delivering medicines, x-ray equipment for simple procedures, phlebotomy, respiratory therapy, and cardiac testing are all done on the floor. Nurses have unique "call systems" and carry a beeper. Patients that need them can dial their number and reach them immediately. A nurse does not have to chase down beeping lights or tones to find out who is in need of an urgent or non-urgent problem. The head nurses and the nurse coordinators carry portable phones. Each zone has its own phone number which rings on the portable cellular phone so it makes it very possible for a physician to reach a specific nurse right away without having to go through several barriers of communication. Charts and all paperwork are well organized in the zone, stereotyped from server to server for simplicity sake. Nurses, when called, answer the phone immediately rather than running to a central desk trying to the find chart or find the patient to answer the physician's need.

The group of people caring for a patient is called a team, that is self managed, caring for patients in a way that makes them always available to describe what is happening to the patient and their physician. The same group of physicians use the same zones and, hence, an excellent rapport is created in a short period of

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time. Thirty-nine FTEs for three 10-bed teams are used instead of the typical 32 FTEs in the old system. A typical team consists of a unit manager, a patient coordinator who is an RN, a staff nurse, a multi-skilled clinical worker, a patient supplemental attendee, a pharmacy tech, a monitor tech, and a secretary.

Recently, a delegation of physicians and administrators visited a nearby hospital where such a model is in place. We had the opportunity to interview both nurses and physicians, as well as some of the administrative staff and patients. The results that were reported from this hospital are not unlike those reported across the country where patient centered care is utilized. Medication errors fall by approximately 40%. Nurses spend 45% of their time instead of 15% in patient care. Patient satisfaction rises from low 80s to the high 90th percentile both for nursing and physician. Nursing and physician satisfaction rises by objective polls. Physicians state that "rounds" on patients take approximately 25% less time when patients are on these particular units.

A typical admission on a patient centered unit takes 20-40 minutes (compared to three to seven hours under our system) obviating the need to use the emergency room for many cases. Pneumatic tubes and satellite pharmacies allow routine medications to patients within 15 minutes of writing an order and stat medications within five minutes. High admitting groups may completely control one zone, hence, improving the efficiency of communication between nurse and physician and keeping patients with similar illness in similar regions where special nursing expertise can be utilized. Nearly everyone we spoke with felt that better communication between the nurse and physician resulted in less paging and less missed calls. Physician orders were expedited, rounds were expedited, scheduling time was expedited, and discharges were expedited.

Glass enclosed "quiet" rooms with ample space for note taking are provided for physicians to do their dictations and workups. Phones are strategically located within the dictating centers and throughout the units to facilitate answering of pages. A physical therapy room is on the floor so that patients can receive this service without having to be transported by gurney to a lower level of the hospital. Some x-ray, blood testing, and cardiac studies are done on the floors of high use.

The entire effect of patient centered care is to dramatically reduce length stay and improve patient, physician and nursing satisfaction while lowering the cost of care. It, nevertheless, requires a major change in the way we, as physicians, care for our patients and the way in which our patients receive their care. As we roll out this system at Lehigh Valley Hospital, it will likely experience glitches as any new process does. We will need everyone's help -- physicians, nursing and administration -- in correcting these glitches. No doubt, these structural changes in our hospital will produce some challenges, in the immediate future, but almost certainly, in the long run, this new system will create a better picture of care for physician, patient and hospital than the one we currently employ.

Sincerely,

John E. Castaldo, M.D.
President, Medical Staff

At the General Medical Staff meeting held on March 13, Linda L. Lapos, M.D., colon-rectal surgeon, was nominated and elected to fill the at-large seat on the Medical Executive Committee. This seat became vacant when Robert X. Murphy, Jr., M.D., was elected President-elect of the Medical Staff. Dr. Lapos will serve in this position through June 30, 1996.

Emergency Department Update

• Planning is underway to determine the feasibility of significantly renovating the current Emergency Department at Cedar Crest & I-78 to create a more optimal environment. It is expected that before the end of March there will be a preliminary plan which will then be modified by input from the nursing and attending physician staff. The major issues under consideration include: patient privacy, more treatment space, radiology support, better patient flow, and an environment which can better handle improved treatment processes. The hospital has committed funds to accomplish a renovation and expansion. It is hoped that within a one year period, there will be a brand new Emergency Department at Cedar Crest & I-78.

• There are groups of nurses and physicians which will be formed in March to review and redesign a variety of processes in the Emergency Department. These include: the expeditious treatment of cardiac patients, improved segregation of resources for the treatment of active emergencies from admitted holding patients, the use of the ExpressCare facility, among others. Through the input received through a recent consultation as well as working with the hospital's own staff, identification of other areas where there is a clear opportunity to improve will be made. Site visits will also be encouraged to learn from what others have done.

• Several leadership vacancies are under active recruitment including administrative and nursing roles. These vacancies will provide an opportunity to reassess the structure, roles and added value of these positions. It is hoped that these voids will be filled in the near future.

• In a recent comprehensive review which was conducted by the Chairman of Emergency Medicine from Tufts University, special note was made about the very strong and high quality nursing staff in our Emergency Department. This is a very important base to begin with. It is fully expected that improvements will be made so that the hospital's high quality team will have a high quality environment in which to provide services to patients.

You are cordially invited
to an Open House and Tour
of the
New GI/Endoscopy Unit
located on the First Floor
of Lehigh Valley Hospital,
Cedar Crest & I-78
(off the Main Lobby)
on
Friday, April 7
from
11 a.m. to 1 p.m.

Refreshments will be served.

Given by
the GI/Endoscopy Unit Staff

(The new unit opens April 10)

Patient Stamp Plate Change

At its meeting of March 7, the Medical Executive Committee approved the removal of the attending physician's name from the patient stamp plate which is used throughout a patient's inpatient stay. The issue leading to this decision related to the difficulty in identifying a patient's attending physician. This is particularly difficult when a patient is treated under more than one service.

Approximately one year ago, the Medical Executive Committee decided that with the on-line capabilities of the PHAMIS system, the stamp plate would only reflect the admitting physician's name. After admission, identification of the attending physician could be done via computer. Problems continue to be experienced with this process, however, as confusion remains as to whether the physician's name on the stamp plate is the admitting or attending physician. Further, there are legal implications to having an admitting physician's name print out on various patient reports instead of the attending physician's name.

Therefore, effective March 20, 1995, the physician's name will be removed from all embossed plates produced on or after that date. Available immediately, identification of the attending physician can be made through the computer system. On nursing units, the physician's name also appears on the spine of the patient's chart as well as on the white board which lists the patient name and bed location.

Since the physician's name will no longer appear on the stamp plate, physicians are reminded to note the attending physician's name on written consult forms to assist office staff in processing the billings for the consults.

If you have any questions concerning this change, please contact John Horoski, Director of Access Services, at 402-8202, or Carol Anne Bury, Vice President, at 402-8240.

Automated Telephone Receptionist for Admitting

In order to better serve our customers' needs in a timely manner, Admitting Bed Control began using the Automated Telephone Receptionist on March 13.

Options with the Automated Receptionist include 1) for patient information or 2) for bed control questions.

If you have any questions regarding this issue, please contact John Horoski, Director of Access Services, at 402-8202 or beeper 1900.

Cath Tray Gloves Update

In the January issue of ***Medical Staff Progress Notes***, an article appeared regarding cath tray gloves. A majority of the physicians using the tray discarded the currently supplied small gloves in favor of larger gloves available on various units. It was noted that several options were explored, such as replacing the gloves or removing them. All the alternatives were found to be more costly since each involved buying a "non-standard" tray.

The Products Review Committee continued to work on this issue with the manufacturer, who was receiving the same complaint from other hospitals. As a result, a larger vinyl glove will be placed in the standard tray beginning with the next production run. This glove will also be satisfactory to the nursing staff. You can expect to begin seeing the new trays in the near future. The new tray will have the same cost as the one it replaces.

Thanks go to members of the Medical Staff for conveying their requirements, and to the Products Review Committee for its work in coming up with a win-win outcome.

Change in Automated Attendant Options for Laboratory

To more efficiently handle incoming calls to the Clinical Laboratory, the options for the Laboratory's automated attendant phone system were changed on March 6. When you call the Clinical Laboratory at 402-8170, you will be instructed to stay on the line when calling from a rotary phone. If you are calling from a touch tone phone, you will be instructed to press "1" to activate the options menu.

The options include:

Option 1 - for a life-threatening emergency
Option 2 - for outpatient laboratory hours at 17th & Chew
Option 3 - for outpatient laboratory hours at Cedar Crest & I-78
Option 4 - for services or results on inpatients or for hospital phlebotomy
Option 5 - for outpatient results and calls from physicians' offices or from outside accounts

If you have any questions concerning this issue, please contact Louise Solomon, Supervisor, Customer Support, at 402-5658, or Diane Magargal, Supervisor, Lab Information Services, at 402-5485.

Physicians interested in donating their old 1994 PDR to the Allentown School District Nurses should contact Carla Wolbach at 820-2195 or 820-2154.

Physician Alert - Debridement Documentation Issue

The Medical Records Department has requested your assistance to avoid KePRO DRG changes resulting in decreased hospital reimbursement due to lack of specific medical record documentation.

Medicare will not reimburse Lehigh Valley Hospital for **excisional** debridement, unless the medical record contains supporting documentation that an **excisional** debridement was performed. Failure to describe the procedure as **excisional** will result in lower reimbursement.

Example:

Principal Diagnosis - 707.0 - Decubitus Ulcer
Secondary Diagnosis - 682.6 - Cellulitis of leg

Procedure - Debridement of Ulcer

Excisional	ICD-9-CM Code 86.22 - DRG 263 Skin Grafts and/or Debridement for Skin Ulcer or Cellulitis with CC. Approximate reimbursement - $10,700.00
Non-Excisional	ICD-9-CM Code 86.28 - DRG 271 Skin Ulcers Approximate reimbursement - $5,100.00

Your cooperation is greatly appreciated! Document! Document! Document!

Mammography Services

Effective February 17, mammography services for inpatients at Cedar Crest & I-78 are now being handled by Lehigh Valley Diagnostic Imaging and may be scheduled by called 435-1600.

Needle localizations for mammogram-guided breast biopsy will be done through the Allentown Breast Diagnostic Center (402-2791).

Pediatric Outpatient Surgery Unit Opens

The Pediatric Outpatient Surgery Unit officially opened on February 27. The unit is located at 17th & Chew on the fourth floor, in the old OTU area. The unit is open 24 hours a day, Monday through Friday, and Saturday mornings. Pediatric patients staying less than 24 hours will be admitted to this area.

The telephone number for the Pediatric Outpatient Surgery Unit is 402-3850.

Helwig Diabetes Center
Diabetes & Pregnancy Program

Effective March 1, the Diabetes & Pregnancy Program of the Helwig Diabetes Center began charging for services provided by the program's professional staff. Since the program began, pregnant patients with diabetes have received quality health care at no cost.

The program's services will remain the same and include:

- initial assessment and education by a registered nurse and registered dietitian (takes approximately three hours)
- individualized management plan carried out through appointments and telephone follow-up
- no charge loan of a blood glucose meter for the duration of pregnancy
- post-partum counseling "That's My Mom Class" or an individual appointment with a registered nurse and registered dietitian.

As of March 1, the patient will be billed for the initial assessment/education appointment and the follow-up appointments. The loan of a blood glucose meter and the post-partum counseling services will continue at no charge. Patients who have entered the program prior to March 1 will not be billed.

No patient will be denied any services of the program if she is unable to pay. If there is a demonstrated financial need, the patient will be referred to a hospital financial counselor.

If you have any questions or concerns about the Diabetes & Pregnancy Program, please call Helen Seifert, R.N., at (610) 402-9885.

Physician Well-Being Group Schedule

For over two years, the Physician Well-Being Group has been meeting on a regular basis. Members of the group have found it to be an excellent avenue at which they can share with their colleagues daily stresses, frustrations, problems, and ideas.

Meetings are held from 6 to 7:30 p.m. at Cedar Crest & I-78. The meeting schedule for the next few month is as follows:

Wednesday, April 5 - Cafeteria Conf. Room
Monday, April 17 - Cafeteria Conf. Room
Wednesday, May 3 - Classroom 2
Monday, May 15 - Cafeteria Conf. Room
Wednesday, May 31 - Cafeteria Conf. Room
Monday, June 12 - Cafeteria Conf. Room
Wednesday, June 28 - Cafeteria Conf. Room

If you are interested in joining the group or have any questions, please contact John C. Turoczi, Ed.D., group facilitator, at 481-9161.

"PaperChase" Medical Research Tool; Network Availability Announced

Last month, Information Services announced the availability of a research tool called **PaperChase**. The new, 24-hour a day service is accessed through the Internet. A limited number of user accounts will be available, initially, to physicians and staff at the Department Head level and above.

PaperChase is an online, menu driven, search engine which allows the user to simultaneously search the following four data bases: **MEDLINE** (National Library of Medicine), **HEALTH** (Health Planning and Administration), **CANCERLIT** (National Cancer Institute), and **AIDSLINE**. The search program automatically eliminates duplicate article references which might be contained in each of the four individual data bases listed above. There are over 8,600,000 references available with approximately 10,000 added each week.

PaperChase allows users to search by medical terminology, title word, author's name, journal title, or institutional address. Searches can be limited, by using a combination of search criteria, to reduce time spent doing research. Each topic reference listed online includes: the Unique Identifier Number of the reference (an 8-digit number assigned by the National Library of Medicine), the last names and initials of all authors, the title of the article, the journal, year, volume, and page number, abstract note ("Abstract Online" or "No Abstract Online"), the Major and Minor Medical Subject Headings under which the reference is indexed, and the language of publication (if other than English).

The searcher can note the reference information (listed above), and then contact the Hospital Medical Library to request that a copy of an article be sent to their office, via interoffice mail.

To gain access to PaperChase, physicians are asked to contact Medical Staff Services at 402-8900. The I/S Service Representatives, Joseph Fruhwirth and Barrie Borger, along with Harry Lukens, Chief Information Officer, will be coordinating PaperChase password distribution and training. Due to the limited number of prepaid accounts available, I/S is allocating a single PaperChase password to each physician group rather than to each individual physician.

For more information about PaperChase, please contact Barrie Borger at 402-1451 or Joseph Fruhwirth at 402-1446 or both may be contacted through e-mail.

The latest edition of Lehigh Valley Hospital's Telephone Directory has been printed.

If you do not receive a copy by April 14 and wish to have one, please contact Physician Relations at 402-9853.

DSM-IV Reliability Field Trials

Members of the hospital's Department of Psychiatry have completed their participation in the American Psychiatric Association's major project, the DSM-IV General Reliability Field Trial. The Diagnostic and Statistic Manual (DSM) was originally designed as a research tool but has developed widespread clinical uses. The major outcome of this study will be a report of the percentages of agreement between subgroups of clinicians regarding different DSM-IV diagnoses based on videotaped patient interviews. The University of Maryland investigators plan to include at least 2,000 U.S. clinicians in all work settings and geographic areas as raters.

At Lehigh Valley Hospital, Peggy E. Showalter, M.D., has served as a site coordinator for the field trial. Joseph Antonowicz, M.D., Paul Haley, M.D., Susan Wiley, M.D., Kenneth Zemanek, M.D., John Abbruzzese, Ph.D., and Jeffrey Knauss, Ed.D., served as rating participants. They viewed 30-minute videotaped patient interviews, independently selected their working diagnosis and their first two rule-out diagnoses, and then answered several questions about how sure they were of their working diagnosis and about the sources of any uncertainty. Investigators had tried to exclude patients representing "textbook" cases and select those with clinical ambiguity.

Library News

Following are new books available at 17th & Chew:

American Psychiatric Association. **Desk Reference to the Diagnostic Criteria from DSM-IV**. American Psychiatric Association, 1994.

Avery. **Neonatology: Pathophysiology and Management of the Newborn**. 4th ed. Lippincott, 1994.

Danforth. **Danforth's Obstetrics and Gynecology**. 7th ed. Lippincott, 1994.

New books available at Cedar Crest & I-78 include:

Cameron. **Atlas of Surgery**. V.2. Mosby, 1994.

Bailey. **Complications of Laparoscopic Surgery**. Quality Medical Pub., 1995.

Burns. **Dementia**. Chapman, 1994.

News from Research

A call for abstracts have been issued by the following:

- The International Society for Pharmacoepidemiology for the 11th International Conference on Pharmacoepidemiology to be held on August 27 in Montreal, Canada. Submission deadline is May 15.

- The American College of Surgeons for the 80th annual Clinical Congress to be held on October 22 in New Orleans, La. Submission deadline is March 31.

For instructions, forms, and further information, contact Kathleen Moser in the Research Department at 402-8747.

Congratulations!

Robert O. Atlas, M.D., obstetrician, has been notified by the American Board of Obstetrics and Gynecology that he has fulfilled the necessary requirements and is now a certified Diplomate of the board.

Robert H. Biggs, D.O., cardiologist, was recently inducted into the College of Fellows of the American College of Osteopathic Internists (ACOI) at its 54th Annual Convention and Scientific Sessions held in Washington, D.C.

John T. Capo, M.D., Orthopedic resident, was recipient of the first prize for Resident/Fellow Competition papers at the Pennsylvania Orthopaedic Society Fall meeting held in Pittsburgh, Pa., in November. Dr. Capo's subject was **Post Operative Stiffness in Wrist Fractures**. Dr. Capo is currently on his second rotation with the newly formed Orthopaedic Resident Affiliation with Penn State-Hershey Medical Center.

George F. Carr, D.M.D., vice chairperson, Department of Dentistry, was voted and accepted into the Academy of Fixed Prosthodontics at their 42nd annual meeting held in Chicago, Ill. on February 24 and 25.

Rafael I. Colon, M.D., pediatrician, was recently notified by the American Board of Pediatrics that he has met the requirements for renewal of certification in the specialty of general pediatrics.

Gary M. Pryblick, D.O., family practitioner, has successfully completed the requirements for certification and has received approval from the American Osteopathic Association for certification by the American Osteopathic Board of Family Physicians.

Papers, Publications and Presentations

Robert O. Atlas, M.D., obstetrician, and **James Balducci, M.D.**, chief, Division of Obstetrics and Section of Maternal-Fetal Medicine, presented posters at the Society of Perinatal Obstetricians in January. Dr. Atlas presented **Abbott TDx FLM Assay vs. L/S and PG in Predicting Fetal Lung Maturity**. Dr. Balducci presented **Preeclampsia: Immunologic Alteration of Nitabuch's Membrane? Clinical Sequelae**. Dr. Balducci has submitted his paper to be published in the Special Issue of the Society of Perinatal Obstetricians's Journal.

George F. Carr, D.M.D., vice chairperson, Department of Dentistry, presented **Creating the Third Dentition with Dental Implants** at the University of Texas, Health Science Center in San Antonio. This lecture was part of a continuing series in Dental Implantology sponsored by the Department of Periodontics at the Dental School. The Preceptorship in Dental Implantology is a one-year course that consists of an intense curriculum incorporating basic sciences and latest research to develop each participant in understanding the rationale and scientific basis for the clinical practice of Implantology.

John D. Harwick, M.D., chief, Division of Otolaryngology, and **John S. Papola, M.D.**, associate chief, Division of Otolaryngology, were recent participants in a symposium on **Advanced Diagnosis and Treatment of Sleep Apnea and Snoring** at the University of Pennsylvania School of Medicine, Philadelphia, Pa.

Peter A. Keblish, M.D., chief, Division of Orthopedic Surgery, was an invited guest/speaker at the University of Zurich-Balgrist 20th International Symposium on the Hindfoot from January 19 to 22. Dr. Keblish presented the Multi Center Study results of the Total Ankle Replacement Arthroplasty and its place in management of ankle arthritis. Under Dr. Keblish's direction, Lehigh Valley Hospital participated in the Multi Center Total Ankle study, which is a controversial subject in orthopedic literature.

Dr. Keblish also participated in the international seminar entitled **Summits of Orthopaedic Technology** in Interlaken, Switzerland. Dr. Keblish moderated panels on Total Hip and Knee Replacement Arthroplasty. He also presented specific topics on Techniques and Results in Hip and Knee Replacement Arthroplasty. Over 200 attendees at the conference represented all continents of the world.

William L. Miller, M.D., Program Director for the Department of Family Practice, spent the week of March 6 in Israel. Dr. Miller was invited to speak at the Israeli National Conference of Family Physicians, their equivalent of our American Academy of Family Practice. He was the lead speaker at the plenary session. Dr. Miller spoke on the **Family Physician's Approach to Pain**.

Upcoming Seminars, Conferences and Meetings

Medical Staff/ Administrative Exchange Session

The April **Medical Staff/ Administrative Exchange Session** will be held on Thursday, April 20, beginning at 5:30 p.m., in Conference Room 1, Side B, of the John and Dorothy Morgan Cancer Center.

The goal of the Exchange Session is to encourage the mutual exchange of information between members of the Medical Staff and senior management in an informal, relaxed atmosphere.

Part of each session is dedicated to answering questions. You may submit them in advance if you wish.

For more information or if you plan to attend, please contact Janet M. Seifert in Physician Relations at 402-9853.

Fourth Mitchell E. Katz, MD Lecture Series

The Fourth Mitchell E. Katz, MD Lecture Series will be held on Wednesday, May 24, from 7:30 a.m. to noon in the Auditorium of Lehigh Valley Hospital, Cedar Crest & I-78.

David B. Nash, M.D., MBA, Director, Health Policy and Clinical Outcomes at Thomas Jefferson University Hospital, Philadelphia, Pa., will present **Practice in a Managed Care Environment** and **Outcomes Management**.

At the conclusion of the lecture, physicians should be able to:

- judge differences among managed care feedback systems
- explain practice profiles
- give examples of practice profiling systems
- discuss positives and negatives of economic credentialing
- explain outcomes management
- give specific examples of programs centering on report card scores
- critique various measures of outcomes including HEDIS and HC4
- discuss how outcome measures might apply to their future practice

For more information about this program, contact Marcia Shaffer, Department of Family Practice, at 402-4955.

Ethics Committee Lecture

Willard Gaylin, M.D., founding member of The Hastings Center, will present **The Ethics of Healthcare Reform: Who Dropped the Ball?** on Thursday, April 6, at 7:30 p.m., in the Auditorium of Lehigh Valley Hospital, Cedar Crest & I-78. In addition, on Friday, April 7, Dr. Gaylin will chair a panel discussion on healthcare reform from 9 a.m. to noon in the Auditorium at Cedar Crest & I-78.

For more information, contact Gale Brunst in the Critical Care Office at 402-8450.

Continued on Page 15

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Regional Symposium Series VI

Dermatology Update will be held on Saturday, April 8, from 8:30 a.m. to 12:15 p.m., in the hospital's Auditorium at Cedar Crest & I-78.

Primary care physicians, dermatologists, psychiatrists, nurses, and other health professionals interested in an update in dermatology will benefit from the program.

At the completion of the program, participants should be able to:
- diagnose and treat those disorders related to summer hazards
- discuss the diagnosis, etiology, and treatment of cutaneous vasculitis
- recognize and treat the various cutaneous manifestations related to psychiatric disorders.

Sixth Annual Pediatric Symposium: Attention Deficit Disorder will be held on Thursday, April 20, from 1:30 to 5 p.m., in the Auditorium of Lehigh Valley Hospital, Cedar Crest & I-78.

Pediatricians, family practitioners, psychiatrists, nurses, social workers, teachers, and other health and education professionals interested in children and adolescents with attention deficit disorder will benefit from the program.

At the completion of the program, participants should be able to:
- describe the medical aspects related to Attention Deficit Disorder (ADD)
- describe the physician's role in assisting children with ADD to develop self esteem
- discuss communication techniques for physician-teacher interaction.

For more information on the above programs, please contact Human Resource Development at 402-1210.

Department of Pediatrics

Non Steroid Treatment of Rheumatoid Arthritis and Other Diseases will be presented by Barbara Ostrov, M.D., pediatric rheumatologist, Hershey Medical Center, on Friday, March 24.

Transport of Acutely Ill Children will be presented by Tony Woodward, M.D., pediatric intensivist, Children's Hospital of Philadelphia, on Friday, April 28.

Both programs will be held at noon in the Auditorium at 17th & Chew.

For more information, contact Beverly Humphrey in the Department of Pediatrics at 402-2410.

Psychiatry Grand Rounds

Psychiatric Complications of Bereavement will be presented by Selby Jacobs, M.D., Professor of Psychiatry, Yale University School of Medicine, Yale New Haven Hospital, New Haven, Conn., on Thursday, April 20, at noon in the Auditorium at 17th & Chew.

As lunch will be provided, pre-registration is requested. For more information or to register, contact Lisa Frick in the Department of Psychiatry at 402-2810.

WHO'S NEW

The Who's New section of ***Medical Staff Progress Notes*** contains an update of new appointments, address changes, newly approved privileges, etc. Please remember that each department or unit is responsible for updating its directory, rolodexes, and approved privilege rosters.

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Allied Health Professionals

Change of Address

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HEALTH NETWORK LABORATORIES

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CRP Clinical Utility

In the February newsletter, we introduced serum C-Reactive Protein (CRP) as a forgotten test that deserves to be readily available and ordered as a STAT test. The following is a selected summary of disease status for which a CRP exhibits excellent sensitivity, specificity and predictive value of a positive or negative result. The exact levels of CRP or paired combination test have not been included because they are method dependent and would not necessarily apply to our methodology.

However, the concepts and conclusions are valid. It is important to note that to maximize the diagnostic efficiency of the CRP test each study employed a cut point that had nothing to do with normal reference ranges. For example, the cut points were defined by an artificial intelligence program to yield a sensitivity of 100% based on the clinical data. This cut point approach for test interpretation (rather than use of a reference range) is becoming more accepted to maximize the diagnostic utility of a test. Examples of this cutpoint approach to diagnosis is CKMB and glucose where above a selected level we have a condition consistent with MI or diabetes respectfully and below which the patient has neither condition.

Monitoring Recovery from Surgery

Following uncomplicated surgery CRP is expected to increase 5 to 10 fold by day 3 post op and drop back to baseline by the seventh day. However, if complications occur such as tissue injury or infection, the CRP will continue to increase to higher levels. A 100% specificity can be expected when a patient has a normal increased response to surgery without this secondary rise.

Transplantation

CRP will be elevated when a kidney transplant is being rejected.

Infections Diseases

CRP has been treated as the single best test for infectious diseases being elevated in bacterial, fungal and parasitic diseases. Viral infections cause a much more moderate CRP increase. The CRP has a better sensitivity and specificity for acute bacterial infections than a CBC. It is slightly less diagnostic than a culture and sensitivity but with the marked advantage of being immediately available. The use of a CRP is especially important in hospital admitted children where a negative result in a febrile child effectively rules out a bacterial infection.

Rheumatic Disease

CRP levels will be increased in patients with active disease activity in a wide variety of autoimmune diseases but not SLE. However, the response will be even greater when the active disease process includes an accompanying bacterial infection.

Appendicitis

To help in the differential diagnosis between acute appendicitis requiring surgery and acute abdominal pain of other origin the CRP can be used alone or in conjunction with a CBC. Of course cut points must be established for both tests. When this is done the combined tests yield a sensitivity of 100% for acute appendicitis. This approach eliminates false-negative results which are the most costly diagnostic error in the management of this type of patient. The predictive value of a positive result is 100% and the efficiency for obtaining the correct diagnosis is 92%.

Acute Inflammatory Pelvic Disease

Both CRP and ESR exhibited essentially equivalent sensitivity and specificity as diagnosed by laparoscopy. The CRP elevation correlated with the severity of the salpingitis where as ESR did not and a CBC did not discriminate between disease and non-disease.

Unstable Angina

In a recent paper 2 groups of physicians measured CRP, amyloid A protein (another acute phase reactant) CK and Troponin T in patients with chronic stable angina, acute unstable angina and acute MI. Focusing on CRP the authors report that elevated levels are highly predictive in identifying patients, upon admission, that were candidates for subsequent severe cardiac events. The sensitivity was 90% with a specificity of 82% for making these predictions but was increased to 100% sensitivity for any patient with an admission CRP greater than 10 mg/dl or for any patient experiencing an increase during hospitalization.

To summarize the elevation of CRP upon hospital admission predicts a poor outcome in patients with unstable angina and may reflect a significant inflammatory component in the pathogenesis of this condition.

John J. Shane, M.D.
Chairperson, Department of Pathology

David G. Beckwith, Ph.D.
Vice President, Operations
Health Network Laboratories

Gerald E. Clement, Ph.D.
Technical Director
Health Network Laboratories

a minute for the medical staff

New year, new CPT codes

The new year brings physicians' offices 535 CPT code changes. Within the evaluation and management codes alone there are 43 changes, including those to narrative descriptions, clarification of terms, and new codes. The following summarizes the important changes and suggestions for dealing with them.

• Integumentary (10040–19499)
Additions: 3 Deletions: 1
Revisions: 5 Total: 9 changes
There are three new codes: 19367, 19368, and 19369. Code 19367 is for breast reconstruction with a TRAM flap, single pedicle, whereas 19369 is for a double pedicle. Code 19368 includes code 19367 and is performed with microvascular anastomosis (supercharging).

• Musculoskeletal (20000–29909)
Additions: 3 Deletions: 5
Revisions: 76 Total: 84 changes
Code 25337 was added for reconstruction for stabilization of unstable distal ulna or distal radioulnar joint. Code 25830 is a diestrual radioulnar joint arthrodesis and segmental resection of ulna, with or without bone graft. And 29445 has been added to report a reapplication of a rigid total contact leg cast.

• Respiratory (30000–32999)
Additions: 5 Deletions: 21
Revisions: 6 Total: 32 changes
The sinus endoscopy codes have been revised for 1995. Codes 31245–31249 and 32151 have been deleted and are referenced to the new codes 31254, 31255, 31256, 31267, and 31276. Terminology has changed dramatically. For example, old code 31245 was for nasal/sinus endoscopy, surgical, with osteomeatal complex resection and/or anterior ethmoidectomy, with or without removal of polyp(s). For 1995, code 31245 is now reported using 31254, which is nasal/sinus endoscopy, surgical, with ethmoidectomy, partial (anterior).

• Cardiovascular (33010–37799)
Additions: 5 Deletions: 6
Revisions: 61 Total: 72 changes
New codes are 33321 (repair of aorta with shunt bypass), 33332 (graft of aorta with shunt bypass), 33572 (coronary endarterectomy, open), 36834 (repair of arteriovenous aneurysm), and 37209 (exchange of arterial catheter). Examples of revisions are codes 35470, 35475, and 35484, which now specify each vessel, trunk, or branch.

• Mediastinum and diaphragm (39000–39599)
Additions: 0 Deletions: 2
Revisions: 4 Total: 6 changes
Code 39000 now includes a biopsy. Codes 39020 and 39547 have been deleted. Code 39010 now indicates transthoracic approach and code 39501 is expanded to include any surgical approach used to repair the laceration of the diaphragm. Code 39545 was revised to include transthoracic or transabdominal, paralytic, or nonparalytic.

• Digestive (40490–49999)
Additions: 37 Deletions: 17
Revisions: 45 Total: 99 changes
There are 13 new esophagectomy codes. Codes 43107, 43108, 43112, and 43113 are for total esophagectomy. Partial esophagectomy codes are 43116, 43117, 43118, 43121, 43122, and 43123. Code 43124 is for total or partial. Code 43360 and 43361 are used for reconstruction after an esophagectomy.

• **Urinary (50010–53899)**
Additions: 4 Deletions: 2
Revisions: 8 Total: 14 changes
Codes 50300, 50320, 50360, 50370, 52317, and 52601 have been revised. The new codes are 51784 (electromyograph of anal/urethral sphincter), 52327 (cystourethroscopy with subureteric injection of implant material), and 52647–52648 (laser surgery of the prostate).

• **Maternity care and delivery (59000–59899)**
Additions: 4 Deletions: 0
Revisions: 1 Total: 5 changes
Three new codes have been added for induced abortion (59855, 59856, and 59857). Code 59050 has been clarified to be used by the consulting physician (nonattending), including supervision and interpretation of fetal monitoring. A new code, 59051, is for interpretation only.

• **Endocrine (60000–60699)**
Additions: 7 Deletions: 2
Revisions: 6 Total: 15 changes
New code 60001 describes the aspiration or injection of a thyroid cyst. Codes 60210 and 60212 describes a unilateral partial thyroid lobectomy (60210) and with a contralateral subtotal lobectomy (60212).

• **Radiology (70010–79999)**
Additions: 7 Deletions: 1
Revisions: 34 Total: 42 changes
There are 34 revisions in the narrative description of the codes for 1995.

• **Medicine (90700–99199)**
Additions: 24 Deletions: 20
Revisions: 41 Total: 85 changes
There are significant changes in the medicine section for 1995, including those made to cardiovascular therapeutic services, noninvasive diagnostic studies, neurology and neuromuscular procedures, and physical medicine and rehabilitation.

• **Evaluation and management**
The evaluation and management section has new guidelines defining "Family, Social, and Past Medical History," "History of Present Illness," "Systems Review (Review of Systems)," "Body Areas," and "Organ Systems." The definitions for detailed and comprehensive history have been revised. These new definition elements need to be incorporated into the providers' daily encounter documentation to support level of service selection and medical necessity under managed care.

Ten steps for a smooth transition to CPT 1995

Your practice's revenue depends upon a thorough understanding of the new CPT changes. The following action steps should help you avoid any coding, billing, or cash-flow problems.

1. Compare last year's manual to the 1995 edition.
2. Read all of the information in the CPT manual, including all section and parenthetical notes.
3. Review all new codes—indicated by a solid black dot (•) next to the code.
4. Review all revised codes—indicated by a solid black triangle next to the code. A change to the main code affects any nonhighlighted indented codes. The index does not indicate changes in the indented codes so be certain to check the code listing for changes.
5. Review all deleted codes.
6. Review all new and old modifiers.
7. Review Appendix B in the CPT manual summarizing additions, deletions, and revisions made in 1995.
8. Make notes regarding how changes will impact revenue.
9. Update your chargemaster, superbill, computer software, and physician cheat sheets.
10. Save the 1994 CPT manual for reference purposes.

This supplement was prepared by **Curtis Udell**, Healthcare Management Advisors, for **MRB**'s sister publication, ***Briefings on Practice Management.***

A Minute for the Medical Staff is an exclusive service for subscribers to **Medical Records Briefing.**

MRB, P.O. Box 1168, Marblehead, MA 01945. Telephone 617/639-1872. Fax 617/639-2982.

P & T HIGHLIGHTS

The following action were taken at the February 13, 1995 Pharmacy and Therapeutics Committee Meeting - Maria Barr, Pharm.D., Barbara Leri, Pharm.D., Richard Townsend, R.Ph.

WILL IT BE ADALAT CC[R] OR PROCARDIA XL[R] FOR LVH?

Currently, two extended release formulations of nifedipine are available on the market. Procardia XL[R] is the product presently on the LVH formulary. The two formulations have a slightly different extended release mechanism giving them a BC bioequivalency rating. A BC rating is given to controlled-release tablets, capsules, or injectables if FDA acceptable bioequivalence data is not available. Two comparative studies have found both agents equieffective in controlling blood pressure. The choice of agent is pending contract negotiation for the most cost effective agent. Stay tuned.

DRUG UTILIZATION EVALUATION CORNER

Paralyzing our Budget

Neuromuscular Blocker (NMB's) used in the operating room as well as critical care units comprise 6.1% of LVH Pharmacy's budget. The departments of Anesthesia and Pharmacy have developed operating room usage criteria. All NMB agents available will be studied for choice of agent, doses utilized, adverse effects and patient outcomes. The study date is tentatively scheduled for April, 1995. NMB use in critical care will also be studied later this year.

Ring in the New Year for Target Drug Reviews

The 1995 calendar year DUE schedule was announced and includes review of the following:

OB/GYN Surgical Prophylaxis
Urokinase
Critical Care Sedation
Ketorolac Injection
Albumin/Hetastarch
NMB's in Critical Care
Pediatric Asthma Therapy
NMB's in Operating Room
Colony Stimulating Factors
Selective Antimicrobial Agents
Ondansetron
Ribavirin
IVIG
Aprotinin
Growth Hormone
Diltiazem
Alteplase
Benzodiazepines and Patient Falls

ADVERSE DRUG REACTIONS

128 Adverse Drug Reactions (ADRs) were reported in the 4 month period from August to December 1994. The majority of reaction were reported by pharmacists (45%), radiology technicians (29%), and nurses (23%). Reactions to contrast media were the most common (34%), followed by anti-infective agents (32%). The report distribution by drug category is shown in Table 1.

Table 1. Adverse Reactions by Drug Category

Drug Category	# Reports	%Reports
Contrast Media	44	34
Anti-infectives	41	32
Cardiovascular Drugs	10	8
Analgesics	10	8
Heparin	6	5
Neuroleptics	4	3
Benzodiazepines	4	3
Thrombolytics (TPA)	2	2

Thirteen (10%) of the reported ADRs were classified as severe. Severe reactions are those that are life threatening, contribute to death or permanent disability, require intensive medical care or greater than 24 hours of therapy. There was one death that was possibly related to drug therapy (Aprotinin). The remainder of the reactions resolved with treatment. A summary of the severe adverse reactions appears in Table 2.

Table 2. Severe Adverse Drug Reactions

Agent	Reaction Type	Probability
Aprotinin	Allergic	Possible
Aspirin	Allergic	Probable
Carbamazepine	Neurologic	Possible
Ceftriaxone	Gastrointestinal	Possible
Contrast(Optiray)	Renal	Possible
Contrast(MD-76)	Respiratory	Probable
Haloperidol	Cardiovascular	Possible
Heparin	Hematologic	Possible
Heparin	Hematologic	Probable
Midazolam	Respiratory	Possible
Morphine	Respiratory	Probable
Procainamide	Cardiovascular	Possible
Quinidine	Hematologic	Possible

ADR Case Report

A patient with a history of asthma, Type II diabetes, hypertension, and obesity is admitted to rule out myocardial infarction. The following medications were ordered: nitroglycerin paste and sublingual tablets, potassium chloride, enalapril, albuterol, lidocaine, aspirin, acetaminophen, and Mylanta. Hives were noted on hospital day 2 and were thought to be temporally related to albuterol. The patient also complained of hoarseness and itching of the throat. Inhalation therapy was changed to metaproterenol. Symptoms persisted on hospital days 3 and 4. Lidocaine was discontinued and an allergy consult was requested. Which of the patients medications are most likely to be the cause of the patients symptoms?

Answer

Aspirin sensitivity occurs in 4% of patients with asthma. Sensitivity reactions are manifested primarily as bronchospasm. Reactions usually develop within 3 hours of ingestion and present as urticaria, angioedema, bronchospasm, severe rhinitis, or shock. Reactions resulting in death within minutes of ingestion have been reported following doses of 325-650 mg. Use of aspirin should be avoided in patients with a history of a severe reaction manifested by a skin reaction, pulmonary symptoms, and/or hemodynamic instability. Aspirin should be cautioned in patients with asthma.

The allergy evaluation in this case noted angioedema and urticaria related to aspirin. The patient was receiving 325 mg daily. Aspirin was discontinued and the reaction resolved over several days after treatment with antihistamines, corticosteroids, and nizatidine.

Adverse Drug Reaction Report Forms are available in all patient care areas and in the Pharmacy Department. If you identify a possible adverse drug reaction and have a question about the reporting or evaluation process, contact Clinical Pharmacy Services (CC-#8884 or 17-#2797).

REMEMBER: ONCE DAILY H2 ANTAGONISTS ARE GIVEN AT BEDTIME

A revision to the standard dosing administration schedule was made for all H2 Antagonists (i.e. nizatidine-Axid, famotidine-Pepcid, cimetidine-Tagamet, and ranitidine-Zantac) ordered once daily. Daily medications are routinely given at 0900, but daily H2 Antagonists will be dosed at 2200 to coincide with the diurnal rhythm of gastric acid secretion.

ANTIEMETIC GUIDELINES FOR ONCOLOGY NURSES

Chlorpromazine (Thorazine) is a phenthiazine antipsychotic agent which also has antiemetic properties. It can be given by a slow IV infusion for oncology related nausea. Look for this addition to the IV Nursing Guidelines.

AUTOMATIC STOP TIME NOTICES WILL CATCH YOUR EYE NOW!

Automatic stop times exist for anticoagulants, post-op antiemetics, most anti-infectives, controlled substances, injectable ketorolac, corticosteroids, oxytocics, parenteral nutrition solutions, and the antipsychotic agents-clozapine.

The notices are often overlooked. In the attempt to assist with timely reorders and enhance patient care, the stop notices will be on fluorescent yellow colored paper. The stop notices are located in front of the chronological sheet in the most current section of the physician order sheets.

ARE ALL COLONY STIMULATING FACTORS (CSF) THE SAME?

Recently, American Society of Clinical Oncologists (ASCO) guidelines for CSF's were published that found G-CSF (Filgrastrim/Neupogen) and GM-CSF (Sargramostim/Leukine) equally efficacious for the control of chemotherapy-induced neutropenia. Based on this information, the departments of Oncology, Infectious Diseases, and Pharmacy have agreed to standardize on one CSF for the LVH formulary. LVH will now carry G-CSF as the sole CSF agent with standard dosing based on patient weight. Beginning March 27, 1995 the following standard dosing will be in effect for *ALL* G-CSF orders:

Schema for Standardizing on G-CSF (Filgrastim/Neupogen)

ORDERED DOSE	KG DOSE RANGE COVERED	G-CSF DOSE USED (FILGRASTIM/NEUPOGEN)
≤ 225mcg	≤ 45kg	210mcg/0.7ml
> 225mcg & ≤ 325mcg	> 45kg & ≤ 65kg	300mcg/1ml
> 325mcg & ≤425mcg	> 65kg & ≤ 85kg	390mcg/1.3ml
>425mcg & ≤ 525mcg	> 85kg & ≤ 105kg	480mcg/1.6ml
> 525mcg	> 105kg	600mcg/2ml

Orders received for GM-CSF based on body surface area (BSA) will b substituted with G-CSF according to the approved dosing guidelines.

FYI

Theo-dur sprinkles are no longer commercially available. Physicians will need to convert their patients to other theophylline formulations. Slo-bid Gyrocaps are one formulary alternative if administration of an extended release capsule by mixing with food is desired. The contents of the capsule may be sprinkled on a soft food such as apple sauce or pudding. The food should be swallowed without chewing and followed with a glass of water or juice to ensure complete swallowing of the beads. When converting patients from Theo-dur Sprinkles[R] to Slo-bid Gyrocaps, or another extended release xanthine derivative, monitor theophylline serum levels for variation following brand changes.

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Medical Staff Progress Notes **is published monthly to inform the Lehigh Valley Hospital Medical Staff and employees of important issues concerning the Medical Staff. Articles should be submitted to Janet M. Seifert, Physician Relations, 1243 S. Cedar Crest Boulevard, Allentown, PA 18103, by the first of each month. If you have any questions about the newsletter, please call Mrs. Seifert at 402-9853.**

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